

REPLACEMENT CLAIMS 1, 8, 21, 23, 26, 31, 38, 51 AND 56

1 1. (AMENDED) A rotating device, comprising:
 2 a) a first plurality of first comb fingers extending
 3 from a first structure;
 4 b) a first plurality of second comb fingers extending
 5 from a second structure, wherein said first comb
 6 fingers are interdigitated with said second comb
 7 fingers in an engagement
 8 c) a rotating element attached to a rotatable flexure
 9 disposed along an axis, wherein said rotating
 10 element is mechanically coupled to said first
 11 structure and hence said first comb fingers; and
 12 d) a biasing element coupled to said rotating
 13 element, for causing said first comb fingers along
 14 with said rotating element to undergo a controlled
 15 angular displacement from said engagement about
 16 said axis;
 17 wherein said first comb fingers along with said
 18 rotating element can further rotate about said axis,
 19 once displaced from said engagement.

1 8. (AMENDED) The rotating device of claim 6, wherein the
 2 position sensor includes one or more of the following:
 3 one or more gap closing electrodes,
 4 a second plurality of first comb fingers coupled to
 5 the rotating element and a second plurality of
 6 second comb fingers that interdigitate with the
 7 first comb fingers in the second plurality,
 8 a capacitance sensor coupled between the first
 9 plurality of first comb fingers and the first
 10 plurality of second comb fingers
 11 a piezoresistive strain gauge,
 12 a piezoelectric sensor,

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13 *A2*
Cont an optical sensor.

1 21. (AMENDED) The rotating device of claim 20 further
2 *A3* comprising a capacitance sensor coupled between said
3 first plurality of second comb fingers and said first
4 plurality of first comb fingers.

1 23. (AMENDED) The rotating device of claim 20 further
2 *A4* comprising a capacitance sensor coupled between said
3 first plurality of second comb fingers and said first
4 plurality of first comb fingers.

1 26. (AMENDED) The rotating device of claim 24, wherein the
2 *A5* position sensor includes one or more of the following:
3 one or more gap closing electrodes,
4 a second plurality of first comb fingers coupled to
5 the rotating element and a second plurality of
6 second comb fingers that interdigitate with the
7 first comb fingers in the second plurality,
8 a capacitance sensor coupled between the first
9 plurality of first comb fingers and the first
10 plurality of second comb fingers
11 a piezoresistive strain gauge,
12 a piezoelectric sensor, or
13 an optical sensor.

1 31. (AMENDED) A rotating device, comprising:
2 *A6* a) a first plurality of first comb fingers extending
3 from a first structure;
4 b) a first plurality of second comb fingers extending
5 from a second structure, wherein said first comb
6 fingers are self-aligned and interdigitated with
7 said second comb fingers in an engagement
8 c) a rotating element attached to a rotatable flexure
9 disposed along an axis, wherein said rotating
10 element is mechanically coupled to said first
11 structure and hence said first comb fingers; and

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12 d) a biasing element coupled to said rotating element,
 13 for causing said first comb fingers along with said
 14 rotating element to undergo a controlled angular
 15 displacement from said engagement about said axis;
 16 wherein said first comb fingers along with said rotating
 17 element can further rotate about said axis, once
 18 displaced from said engagement.

1 38. (AMENDED) The rotating device of claim 36, wherein the
 2 position sensor includes one or more of the following:
 3 one or more gap closing electrodes,
 4 a second plurality of first comb fingers coupled to
 5 the rotating element and a second plurality of
 6 second comb fingers that interdigitate with the
 7 first comb fingers in the second plurality,
 8 a capacitance sensor coupled between the first
 9 plurality of first comb fingers and the first
 10 plurality of second comb fingers
 11 a piezoresistive strain gauge,
 12 a piezoelectric sensor,
 13 an optical sensor.

1 51. (AMENDED) The rotating device of claim 50 further
 2 comprising a capacitance sensor coupled between said
 3 first plurality of second comb fingers and said first
 4 plurality of first comb fingers.

1 56. (AMENDED) The rotating device of claim 54, wherein the
 2 position sensor includes one or more of the following:
 3 one or more gap closing electrodes,
 4 a second plurality of first comb fingers coupled to the
 5 rotating element and a second plurality of second comb
 6 fingers that interdigitate with the first comb fingers
 7 in the second plurality,

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8 *Ag* a capacitance sensor coupled between the first
9 *Cont* plurality of first comb fingers and the first plurality
10 of second comb fingers
11 a piezoresistive strain gauge,
12 a piezoelectric sensor, or
13 an optical sensor.

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